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SPECIAL REPORT

Cost of Capital: Reflections of a CEO

George N. Hatsopoulos

The Cost of Capital

A corporation's cost of equity is the rate of return stockholders demand. The pre-tax cost of debt is the interest rate, i.e., the rate of return that lenders demand. Whereas the after-tax cost of debt to a corporation is less than the interest rate, the cost of equity in America is the same as the return demanded by stockholders because no corporate tax deduction is provided for the payments to corporations' stockholders.

There are two kinds of corporate investments: investments in hard assets, such as plant and equipment; and soft investments, such as research and product development, the development of new markets, and the training of employees. Different kinds of investments may have different costs of capital.

One difference in the cost of capital among investments comes from differences in taxation. For example, the depreciation rate allowed by the tax code is different for structures and for equipment. However, the principal difference in the cost of capital among the assets of the same corporation comes about because of differing sources of funds applicable to various assets. In one extreme, general purpose real estate can be financed mostly by low-cost debt whereas, in the other extreme, soft investments can only be financed through equity.

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The cost of capital for soft investments is identical to the cost of equity for two reasons. The first is that it is nearly impossible for lenders to assess the value of soft assets with any degree of certainty. Consequently, such assets do not provide suitable collateral for debt financing. The second reason is that accounting rules in all countries require that most soft investments be charged against current income. A reduction of current income can only be justified to stockholders if they perceive that it is likely to produce future income that exceeds, in discounted present value, the cost of the investment. The applicable rate for such a discounting exercise is the cost of equity. The after-tax cost of equity not only controls the amount of the soft investments that a corporation makes, but also the time horizons of such investments.

Industrial Competitiveness and the Cost of Capital

Historically, the rate of fixed capital formation was an important determinant of the industrial competitiveness of a country. In recent years, however, investments in soft assets have become increasingly more important. In fact, they may well be the most important type of capital for the industrial competitiveness of high-wage countries such as the United States, Germany, and Japan.

The reason for this shift is that several countries have reached a stage of technological development sufficient to compete with the United States in technology-intensive industries. These industries command a higher price per unit of labor than do commodity-oriented industries, because fewer countries can enter the market. In addition, there are markets such as consumer electronics in which market dominance and product quality can provide a competitive edge sufficient to allow the leading companies to command higher prices. Achievement of

George N. Hatsopoulos is a member of the board of directors of the American Council for Capital Formation Center for Policy Research and chairman of the board and president of Thermo Electron Corporation. This *Special Report* is excerpted from an article by the same title that appears in the April 1991 issue of *Business Economics*. Reprinted by permission of the author and the National Association of Business Economists.

such dominance combined with a reputation for quality requires heavy long-term intangible investments not only in product development but also in marketing and service. *Thus, for a high-wage country to be competitive, a low cost of capital for soft or intangible investments is essential.*

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America's competitiveness problem in technology-based industries is due neither to the lack of basic research nor to a lack of innovations. In fact, our failure stems from the inadequate rate at which U.S. firms bring new products to market. There are numerous examples, ranging from robots to flat-screen displays, of American inventions that were first exploited commercially by foreign corporations. America's extraordinary ability to create new technologies derives both from the high value American society places on individualism and entrepreneurship, and from the support the U.S. government provides for research. On this latter point, it should be noted that, although Japan spends a greater share of its gross national product in non-defense research and development than does the United States, it spends a trivial amount for basic research. Nevertheless, American industry misses many opportunities to utilize domestically created technology by showing reluctance to make the necessary long-term investments in product development and marketing.

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What Affects Corporate Time Horizons

A nation's cost of equity has a significant effect on the time horizons of native companies. Such a relationship will be obvious to anyone who has dealt with corporate finance. What is less obvious is the possibility that time horizons of U.S. corporations have been adversely influenced by the entry into our domestic markets of foreign corporations that have low equity cost.

Long-term technological advancements, such as the development of integrated circuits, can offer tremendous benefits to end users. In such cases, a high cost of equity applicable to all corporations need not deter any one corporation from undertaking such a project, because it would eventually be in a position to recover its costs. Prior to the 1970s, U.S. technology-based corporations had few foreign competitors and, therefore, could maintain long time horizons in spite of high equity costs. More recently, however, the emergence of firms from Japan and Germany with strong technologies and lower equity costs has significantly limited the range of long-term projects that U.S. corporations can pursue profitably.

Another issue relating to time horizons is often misunderstood. Two companies with differing price-to-earnings ratios can have the same cost of equity, provided the company with the higher price-to-earnings ratio has an appropriately higher expected growth rate. Two such companies, however, would tend to have a different propensity for long-term investments, because the signals from the equity markets are different. What stockholders are telling the company with the high price-to-earnings ratio is that they are more interested in its future growth rather than its current earnings. The message to the other company is the opposite: future growth is not expected; current earnings are more important.

Managing the Cost of Capital: What Managers Can Do

The cost of capital varies more from company to company in any one country than it does on average from country to country. Much of the variation is due to factors that are beyond the control of corporate executives. Such factors include public policy and the stage of the corporation's development. Nevertheless, there are many things corporate managers can do to affect their firms' cost of capital significantly.

The most obvious and broadly recognized tool is management of the company's financial leverage. It is well known that for any firm there is an optimum leverage that minimizes its cost of capital. Such an optimum depends on many factors, such as the firm's line of business. It is also well known that the corporation's relationships with its creditors and its stockholders are most important. Yet the managers of most U.S. corporations do not appear to understand the extent to which they can influence not only the perceptions their stockholders have about their companies, but also the composition of the stockholders.

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The top management of my company, Thermo Electron Corporation, decided twenty years ago to drive the ownership of our stock into the hands of individuals and institutions that are both interested in understanding our businesses and intent on investing for the long term. We believe we have accomplished our objective, as witnessed by the fact that over the past fifteen years the price of our stock has averaged 20 times earnings. We have

never paid a dividend, and our declared policy is not to pay dividends in the foreseeable future.

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ownership from short-term to long-term investors. This can have an important effect on a company's time horizon. Even when all investors require identical returns on equity, they may differ in the degree of credibility they assign to a company's prediction of high future returns from a given investment. Attracting investors who view such forecasts as credible will enable the firm to undertake longer-horizon projects.

One class of investors we pursued was Europeans, who are typically more long-term oriented than Americans. Moreover, most Europeans pay no capital gains tax on the appreciation of equities, thus making our shares of particular interest. Many American companies raise equity and convertible debt in Europe, but few follow up by keeping in near constant contact with their international investors, especially in bad times. The contrast we provided to European investors by our frequent visits has been particularly effective. The result of our twenty-year campaign has been to increase the ownership of our shares in Europe from less than 10 percent in 1970 to more than 30 percent in 1990.

Managing the Cost of Capital—What Can Government Do Now

The price of capital, like that of any other commodity in the marketplace, balances demand with supply. The elimination of barriers to capital flows has created a common source of funds for debt financing available to all countries. As a result, interest rates in various industrialized nations have converged. Equity financing in each country, however, is provided mainly by each nation's pool of savings. For that reason, the low saving rate in the United States is a principal cause of its high equity costs. The net U.S. saving rate in the 1980s was 4 percent of national income—a sharp contrast to 12 percent in Germany and 20 percent in Japan.

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equity costs. National saving provides funds to both equity-financed and debt-financed investments. In the United States, the returns from debt-financed projects are taxed less than those from equity-financed projects. The opposite is true in Germany and Japan.

The high taxation of corporate equity investments in the United States derives from the double taxation of dividends and from the double taxation of retained earnings. Double taxation of dividends is readily apparent: Earnings are taxed at the corporate level and then again at the investor level when paid as dividends. Double taxation of retained earnings, however, is a more abstract concept. It comes

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about because, on average, corporate shares appreciate directly in proportion to after-tax retained earnings. When an investor buys a corporate share and then sells it later at a higher price, the tax is levied at the capital gains rate—even though the appreciation may be the sole result of the accumulation of after-tax profits.

In Germany, capital gains from equity investments are excluded from taxation at the investor level. The same was true in Japan prior to 1989; since 1989, capital gains from equity investments have been taxed at a small rate that decreases for longer-term investments. In both of these countries, the double taxation of retained earnings is virtually eliminated. Dividends, on the other hand, are given only minor relief from double taxation. That has led corporations in Germany and, in particular, Japan to retain most of their earnings, and to pay only small dividends. These policies cause national saving in our two major competitors to be funneled mostly into corporate equities.

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Conclusion

The American public has a major role to play in reducing our cost of capital because in our political system the public has a major influence on what the government does.

Over the first 200 years of its existence, America created the most prosperous society in the world. It started out as a minor player, compared to the European economic giants of the nineteenth century, but ultimately the U.S. overtook all of them by a wide margin. It did so by saving a larger share of its national income than did any other country.

The Great Depression brought the realization that America may have gone too far in accumulating savings and curtailing consumption. Aided by World War II, our society started to consume more and save less. This shift had dramatic beneficial effects that peaked during the 1960s. Feeling omnipotent at that time, we continued to spend more and save less. Today, most of the American public believes that saving is bad, consumption is good, and that the federal deficit does not have much effect on their own well-being. Surveys of the past few years confirm such public attitudes. Americans have seen their wages stagnate over the past dozen years but attribute the problem to everyone but themselves.

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It is time for the public to understand that the economic problems we face are of our own making, and they are not caused by foreigners. If we continue to consume 96 percent of our national income and save only 4 percent, if we continue to depend on foreign lenders to finance our budget deficit, and if we continue to demand more government spending without increasing taxes, our future is bleak. But, if we restore our faith in investing for the future—which served this country so well in the past—our society's advantages in natural and human resources will enable America to grow and remain the most prosperous society in the world. Government and business will do their share only when the public understands the root causes of our difficulties. ■

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